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EXAMINER

AILES, BENJAMIN A

ART UNIT	PAPER NUMBER
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2142

MAIL DATE	DELIVERY MODE
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04/30/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/884,122

Applicant(s)

ZHUANG ET AL.

Examiner

Benjamin A. Ailes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-21,24-32 and 39-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-21,24-32 and 39-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to correspondence filed 05 February 2007.
2. Claims 12-21, 24-32 and 39-44 remain pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
5. Claims 12-21, 24-32 and 39-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacNaughton et al. (US 6,020,884), hereinafter referred to as Knight, in view of Tyra et al. (US 6,442,565 B1), hereinafter referred to as Tyra.
6. Regarding claim 12, MacNaughton teaches in column 7, ll. 8-13 a method for web-enabled 2-way remote messaging, comprising establishing a remote messaging session (persistent connection between the community client being user side, and the community server being server-side) between a web client (user) and an event provider

(community server) via a remote messaging facility client (community client), connecting to the web client, and a remote messaging facility server (community server), connecting to an event producer (community server), the web client issuing requests and receiving responses during the remote messaging session (col. 3, lines 60-66, Community Server serves requests from the Community Client, col. 6, lines 41-47, and col. 7, lines 8-13 wherein MacNaughton teaches the creation of a persistent connection using HTTP messages.). MacNaughton teaches "subscribing, by the web client via the remote messaging facility client, an event that is related to an action performed by the event producer on a slot of a message board located in the remote messaging facility server" wherein MacNaughton teaches a user being able to subscribe to a notification service, the notifications are associated with the community and the user may be notified of specific events at specified intervals (col. 7, line 57 – col. 8, line 9). Online content within the community includes a messaging server wherein users communicate using a threaded message server wherein a slot is interpreted as being an aspect of a message board (col. 8, ll. 26-40, message board). MacNaughton teaches the notification of online content at specified intervals (col. 8, ll. 6-9) but does not explicitly teach "listening, by a listener agent in the remote messaging facility server, the event, the listener agent connecting to a channel, dedicated to the web client, and the slot, the listener agent receiving a notification when the action associated with the event is performed by the event producer on the slot". However, in related art, Tyra teaches "listening by a listener agent" wherein Tyra teaches a method wherein a data structure (a queue) is monitored by listener objects and when certain events appear in the data

structure, actions in regards to notifying subscribed users to the event are performed (see Tyra, col. 7, ll. 11-15 and ll. 20-25). The slot of a message board is interpreted as a data structure that is monitored for operations (e.g. insertion). Therefore this monitoring aspect of Tyra in combination with MacNaughton teaches on the limitation of "listening, by a listener agent in the remote messaging facility server, the event, the listener agent connecting to a channel, dedicated to the web client, and the slot, the listener agent receiving a notification when the action associated with the event is performed by the event producer on the slot" by the listener objects continuously monitoring.. MacNaughton teaches event notifications being submitted to subscribers utilizing an exemplary web protocol, HTTP, which reads on "dispatching the notification from the remote messaging facility server to the web client via a web server and the remote messaging facility client, said notification being encoded by the web server using a web protocol to generate a response" (col. 7, ll. 8-20 wherein MacNaughton teaches the communication between a client and a server being performed using a persistent connection utilizing HTTP messages which can send appropriate notifications.). One of ordinary skill in the art at the time of the applicant's invention would have found it obvious to enable MacNaughton's invention to be able to listen for events to happen instead of at only specified intervals as evidenced by Tyra, wherein Tyra teaches it is advantageous to have a data structure continuously monitored for certain events to occur (col. 7, ll. 1-15 and 20-25). One of ordinary skill in the art would have been motivated to combine the teachings of Tyra with the teachings of MacNaughton because Tyra teaches that it is advantageous to improve upon

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notification systems in regards to the changing of data within distributed systems (Tyra, column 1, ll. 52-54).

7. Regarding claim 13, MacNaughton and Tyra teach the method wherein said requests includes at least one of a begin session request to start a remote messaging session (MacNaughton, col. 9, lines 6-11); an end session request to finish a remote messaging session (MacNaughton, col. 9, lines 19-23); a check session request to examine the status of a remote messaging session (MacNaughton, col. 9, lines 53-60); a subscribe event request to subscribe an event with the remote messaging facility server (MacNaughton, col. 9, lines 6-11); an unsubscribe event request to end a subscription of an event with the remote messaging facility server (MacNaughton, col. 9, lines 19-23); a query data request to inquiry a data item in the message board (MacNaughton, col. 9, lines 60-64); an listen event request to start a listening connection (MacNaughton teaches the need for a subscription request, col. 8, lines 8-10); and a post message request to post a message from the web client to a message handler associated with a slot in the message board (MacNaughton, col. 9, lines 60-64). The rationale used to combine MacNaughton and Tyra in the rejection of claim 12 applies equally as well to claim 13.

8. Regarding claim 14, MacNaughton and Tyra teach the method wherein said requests are encoded using a web protocol (MacNaughton, col. 3, lines 54-65 and col. 6, lines 13-34). The rationale used to combine MacNaughton and Tyra in the rejection of claim 12 applies equally as well to claim 14.

9. Regarding claim 15, MacNaughton and Tyra teach the method wherein said responses are encoded by said web server using a web protocol (MacNaughton, col. 3, lines 54-65 and col. 6, lines 13-34). The rationale used to combine MacNaughton and Tyra in the rejection of claim 12 applies equally as well to claim 15.

10. Regarding claim 16, MacNaughton and Tyra teach the method wherein said web protocol used to encode the requests includes HyperText Transport Protocol (MacNaughton, col. 6, lines 13-34); and said web protocol used by said web server to encode the responses includes HyperText Transport Protocol (MacNaughton, col. 6, lines 13-34). The rationale used to combine MacNaughton and Tyra in the rejection of claim 12 applies equally as well to claim 16.

11. Regarding claim 17, MacNaughton and Tyra teach the method wherein said establishing comprises sending a begin session request, by the web client via the remote messaging facility client and the web server, to the remote messaging facility server to establish the remote messaging session (MacNaughton, col. 9, lines 6-11); authenticating the web client with respect to the event producer to generate a decision of either positive or negative (MacNaughton, col. 6, lines 35-41, and 61-66, and col. 13, lines 29-37); and starting, by a session manager in the remote messaging facility server, the remote messaging session if the decision is positive (MacNaughton, col. 7, lines 8-14). The rationale used to combine MacNaughton and Tyra in the rejection of claim 12 applies equally as well to claim 17.

12. Regarding claim 18, MacNaughton and Tyra teach the method wherein said subscribing comprises: sending a subscribe event request to the session manager to

subscribe the event, the subscribe event request specifying the slot and the action (MacNaughton teaches on this necessary step, col. 8, ll. 8-10); setting up, by the session manager, a channel to store the occurrences of the event (Tyra, read broadly as a data structure teaches on the manipulation of listening to certain queue sections, col. 7, ll. 10-15); and connecting the channel with the listener agent associated with the slot of the message board (Tyra, read broadly as a data structure teaches on the manipulation of listening to certain queue sections, col. 7, ll. 10-15). The rationale used to combine MacNaughton and Tyra in the rejection of claim 12 applies equally as well to claim 18.

13. Regarding claim 19, MacNaughton and Tyra teach the method wherein said listening comprises: sending an listen event request to the remote messaging facility server (Tyra, col. 7, ll. 20-25); setting up a listening connection, for the event subscribed in said subscribing, said listening connection associating with the channel dedicated to the web client (Tyra, col. 7, ll. 20-25); monitoring, by the listener agent connecting to both the channel and the slot, the action performed by the event producer on the slot that triggers the event (Tyra, col. 7, ll. 20-25); receiving the notification corresponding to the subscribed event when the action is performed by said event producer (Tyra, col. 7, ll. 25-30); and adding, by the listener agent, the notification to the channel (Tyra, col. 7, ll. 25-30). The rationale used to combine MacNaughton and Tyra in the rejection of claim 12 applies equally as well to claim 19.

14. Regarding claim 20, MacNaughton and Tyra teach the method further comprising filtering the notification prior to adding the notification to the channel (MacNaughton, col.

4, lines 35-41). The rationale used to combine MacNaughton and Tyra in the rejection of claim 12 applies equally as well to claim 20.

15. Regarding claim 21, MacNaughton and Tyra teach the method wherein dispatching comprises: forwarding, by a channel manager that manages the channel, the notification to the web server (MacNaughton, col. 9, lines 28-34); encoding, by the web server, the notification using the web protocol to generate the response (MacNaughton, col. 6, lines 13-34); and sending the response to the web client via the remote messaging facility client (MacNaughton, col. 9, lines 28-34). The rationale used to combine MacNaughton and Tyra in the rejection of claim 12 applies equally as well to claim 21.

16. Regarding claims 24 and 39, MacNaughton teaches in column 7, ll. 8-13 a method for a remote messaging facility server, comprising: establishing a remote messaging session based on a begin session request sent from a web client (user) via a remote messaging facility client (community client) and a web server (community web server). MacNaughton teaches a user being able to subscribe to a notification service at specified intervals, therefore content data is monitored, which when read broadly reads on the limitation of "subscribing an event based on a subscribe event request specifying a slot on a message board in the remote messaging facility server and an action, wherein the event is defined with respect to the action performed on the slot by an event producer" (col. 3, lines 54-66, and col. 6, lines 30-34). MacNaughton teaches the notification at specified intervals but does not explicitly teach "listening, by a listener agent in the remote messaging facility server, the event, the listener agent connecting to

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a channel, dedicated to the web client, and the slot, the listener agent receiving a notification when the action associated with the event is performed by the event producer on the slot; and dispatching the notification from the remote messaging facility server to the web client via a web server and the remote messaging facility client, said notification being encoded by the web server using a web protocol to generate a response". However, in related art, Tyra teaches a method wherein a queue is monitored by "listeners" persistently and when certain events appear in the queue, actions in regards to notifying subscribed users to the event are performed (see Tyra, col. 7, ll. 11-15 and ll. 20-25) which teaches on the limitation of "listening, by a listener agent in the remote messaging facility server, the even, the listener agent connecting to a channel, dedicated to the web client, and the slot, the listener agent receiving a notification when the action associated with the event is performed by the event producer on the slot" by the listeners continuously monitoring. Tyra further teaches event notifications being submitted to subscribers utilizing an exemplary web protocol, HTTP, which reads on "dispatching the notification from the remote messaging facility server to the web client via a web server and the remote messaging facility client, said notification being encoded by the web server using a web protocol to generate a response". One of ordinary skill in the art at the time of the applicant's invention would have found it obvious to enable MacNaughton's invention to be able to persistently listen for events to happen instead of at only specified intervals as evidenced by Tyra, wherein Tyra teaches it is advantageous to have a data structure continuously monitored for certain events to occur. One of ordinary skill in the art would have been

motivated to combine the teachings of Tyra with the the teachings of MacNaughton because Tyra teaches that it is advantageous to improve upon notification systems in regards to the changing of data within distributed systems (Tyra, column 1, ll. 52-54). The limitation "a channel manager for managing zero or more channels designed for subscriptions of events, said managing associating each subscription with a channel to store the occurrences of the subscribed event and dispatching each stored event to the remote messaging facility client that represents the web client that subscribes the stored event" is taught by MacNaughton and Tyra wherein MacNaughton teaches the handling of user subscriptions in column 9, ll. 27-40 and Tyra column 7, ll. 20-25.

17. Regarding claims 25 and 40, MacNaughton and Tyra teach the method wherein the establishing comprises: receiving the begin session request from the web client, authenticating the web client (MacNaughton, col. 9, lines 6-11, and col. 6, lines 35-41, and 61-66, and col. 13, lines 29-37); and starting the remote messaging session if the authentication passes (MacNaughton, col. 7, lines 8-14). The rationale used to combine MacNaughton and Tyra in the rejection of claim s 24 and 39 apply equally as well to claims 25 and 40.

18. Regarding claims 26 and 41, MacNaughton and Tyra teach the method wherein the subscribing comprises: receiving the subscribe event request from the web client (MacNaughton, col. 8, ll. 8-10); setting up a channel associating with the remote messaging session (Tyra, col. 7, ll. 20-25); and connecting the channel with a listener agent associated with the slot of the message board (Tyra, col. 7, ll. 15-20). The

rationale used to combine MacNaughton and Tyra in the rejection of claims 24 and 39 apply equally as well to claims 26 and 41.

19. Regarding claims 27 and 42, MacNaughton and Tyra teach the method wherein the listening comprises: monitoring the slot on the message board to observe the event related to the action to be performed by the event producer on the slot Tyra, col. 7, ll. 20-25); receiving the notification when the event is observed (col. 7, ll. 20-25); and adding the notification to the channel set up for the remote messaging session (col. 7, ll. 25-30). The rationale used to combine MacNaughton and Tyra in the rejection of claims 24 and 39 apply equally as well to claims 27 and 42.

20. Regarding claims 28 and 43, MacNaughton and Tyra teach the method further comprising: filtering, by a filter agent, the notification prior to said adding (MacNaughton, col. 4, lines 35-41). The rationale used to combine MacNaughton and Tyra in the rejection of claims 24 and 39 apply equally as well to claims 28 and 43.

21. Regarding claims 29 and 44, MacNaughton and Tyra teach the method wherein said dispatching comprises: forwarding, by the channel, the notification to the web server (MacNaughton, col. 9, lines 28-34); encoding, by the web server, the notification using the web protocol to generate the response (MacNaughton, col. 6, lines 13-34); and sending the response to the web client via the remote messaging facility client (MacNaughton, col. 9, lines 28-34). The rationale used to combine MacNaughton and Tyra in the rejection of claims 24 and 39 applies equally as well to claims 29 and 44.

22. Regarding claim 30, MacNaughton and Tyra teach the method further comprising registering the event producer with the message board in the remote messaging facility

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server (col. 4, lines 16-27). The rationale used to combine MacNaughton and Tyra in the rejection of claim 24 applies equally as well to claim 30.

23. Regarding claim 31, MacNaughton and Tyra teach the method further comprising: specifying a session agent that authenticates a web client for the event producer (MacNaughton, col. 6, lines 35-41, and 61-66, and col. 13, lines 29-37); and specifying a filtering agent that filters an observed event associated with the event producer (MacNaughton, col. 4, lines 35-41). The rationale used to combine MacNaughton and Tyra in the rejection of claim 24 applies equally as well to claim 31.

24. Regarding claim 32, MacNaughton and Tyra teach the method further comprising updating, by an event producer, a slot of the message board (MacNaughton, col. 4, lines 28-35). The rationale used to combine MacNaughton and Tyra in the rejection of claim 24 applies equally as well to claim 32.

Response to Arguments

25. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

26. Applicant states in the remarks filed, on page 13 that "It is unclear exactly what Tyra's "listener" does, since it is not described in detail other than to "register itself in a queue". As stated above in the rejection of claim 12, Tyra is relied upon for teaching in column 7, lines 11-15 and 20-25 a method wherein a queue is monitored by "listeners" persistently and when certain events appear in the queue, actions in regards to notifying subscribed users to the event are

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performed and therefore when combined with the teachings of MacNaughton teaches on the limitation of “listening, by a listener agent in the remote messaging facility server, the event, the listener agent connecting to a channel, dedicated to the web client, and the slot, the listener agent receiving a notification when the action associated with the event is performed by the event producer on the slot” by the listeners continuously monitoring. Tyra teaches on the idea of continuously monitoring a data structure and therefore teaches the idea of persistently listening. One of ordinary skill in the art at the time of the applicant’s invention would have found it obvious to enable MacNaughton’s invention to be able to persistently listen for events to happen instead of at only specified intervals as evidenced by Tyra, wherein Tyra teaches it is advantageous to have a data structure continuously monitored for certain events to occur.

27. In response to applicant's argument that the references fail to show certain features of applicant’s invention, it is noted that the features upon which applicant relies (i.e., “persistent listening connection”) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

28. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Knight et al. (US 6,571,234 B1) teaches a system and method for managing an online message board utilizing a number of community and customized software search robots.

Clark (US 7,203,778 B2) teaches a method for notifying clients of a specific change in a data processing system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin A. Ailes whose telephone number is (571)272-3899.

The examiner can normally be reached on M-F 6:30-4, IFP Work Schedule.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

baa

Beatriz Prieto
BEATRIZ PRIETO
PRIMARY EXAMINER